

Two new species of *Dicysta* (Hemiptera, Tingidae) from New Caledonia

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KEY WORDS

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ABSTRACT

Two new species belonging to the genus *Dicysta* Champion are described from New Caledonia, being the first record of this genus from the island. Both species were found in dense evergreen forest, in two patches differing in their botanical composition.

MOTS CLÉS

Hemiptera,
Tingidae,
Dicysta,
taxonomie,
nouvelles espèces,
Nouvelle-Calédonie.

RÉSUMÉ

Dans ce travail, nous décrivons deux nouvelles espèces de Nouvelle-Calédonie appartenant au genre *Dicysta* Champion. Il s'agit de la première mention du genre pour cette île. Les deux espèces se trouvent en forêt dense humide, dans deux sites de composition botanique différente.

INTRODUCTION

In order to study the community structure of canopy arthropods in primary forest in New Caledonia, the arthropods have been sampled by insecticide knockdown (Guilbert *et al.* 1994). The community structure is different between forests at the level of families (Guilbert *et al.* 1994, 1995), and at the specific level for the Formicidae (Guilbert & Casevitz-Weulersse 1997). The lacebugs (Tingidae, Hemiptera) are represented by 441 individuals in the samples, which will be identified for further study of their community structure.

Lacebugs were formerly known in New Caledonia by seven species, all of them endemic: *Agaotingis australis* (Montrouzier), *Corinthius typicus* Distant, *Epimixia nigriceps* (Signoret), *Nobarnus signatus* (Distant), *Nobarnus typicus* Distant, *Paracopium caledonicum* Drake and *Physatocheila irregularis* Montrouzier. Two species of the genus *Dicysta* Champion are described here, representing the first record of this genus from New Caledonia. All other species of *Dicysta* were described from South America (Brazil, Panama, Paraguay and Peru), except for *D. cara* Drake, 1939 and *D. parilis* Drake, 1939, which were described from Queensland (Australia).

***Dicysta neocaledonica* n.sp.**
(Figs 1, 2)

TYPE LOCALITY. — **New Caledonia.** Rivière Bleue (P6, see later), alt. 160 m, sampled by fogging, 16.VII.1992, holotype ♂ and 15 paratypes, 8 ♂♂, 7 ♀♀ (deposited at MNHN, Paris).

DERIVATIO NOMINIS. — This name refers to the country from where it was collected.

DESCRIPTION

White, hyaline, iridescent, sometime slightly brownish-testaceous; body pale ventrally, sometimes brown, with some veinlets brownish. Pronotum, legs and antennae brownish-testaceous. Length 3.28 mm, width at widest part 2.08 mm.

Head very short, without cephalic spines, concealed by an overhanging hood, bucculae

areolate and closed in front, rostrum extending beyond the metasternum. Antennae long, slender, sparsely pubescent, last joint slightly stouter, joints measurements (in mm): I, 0.27; II, 0.08; III, 1.09; IV, 0.48. Legs long, slender, slightly pubescent.

Pronotum moderately convex, not punctate, glabrous, lateral carinae absent, median carina as

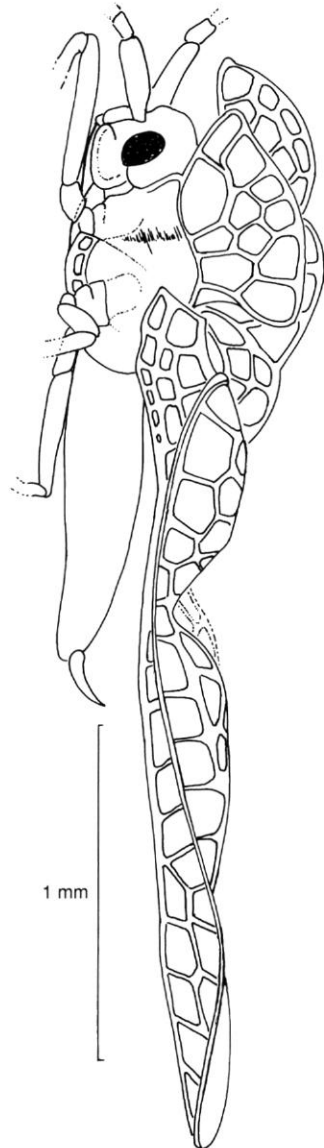


FIG. 1. — *Dicysta neocaledonica* n.sp., profile.

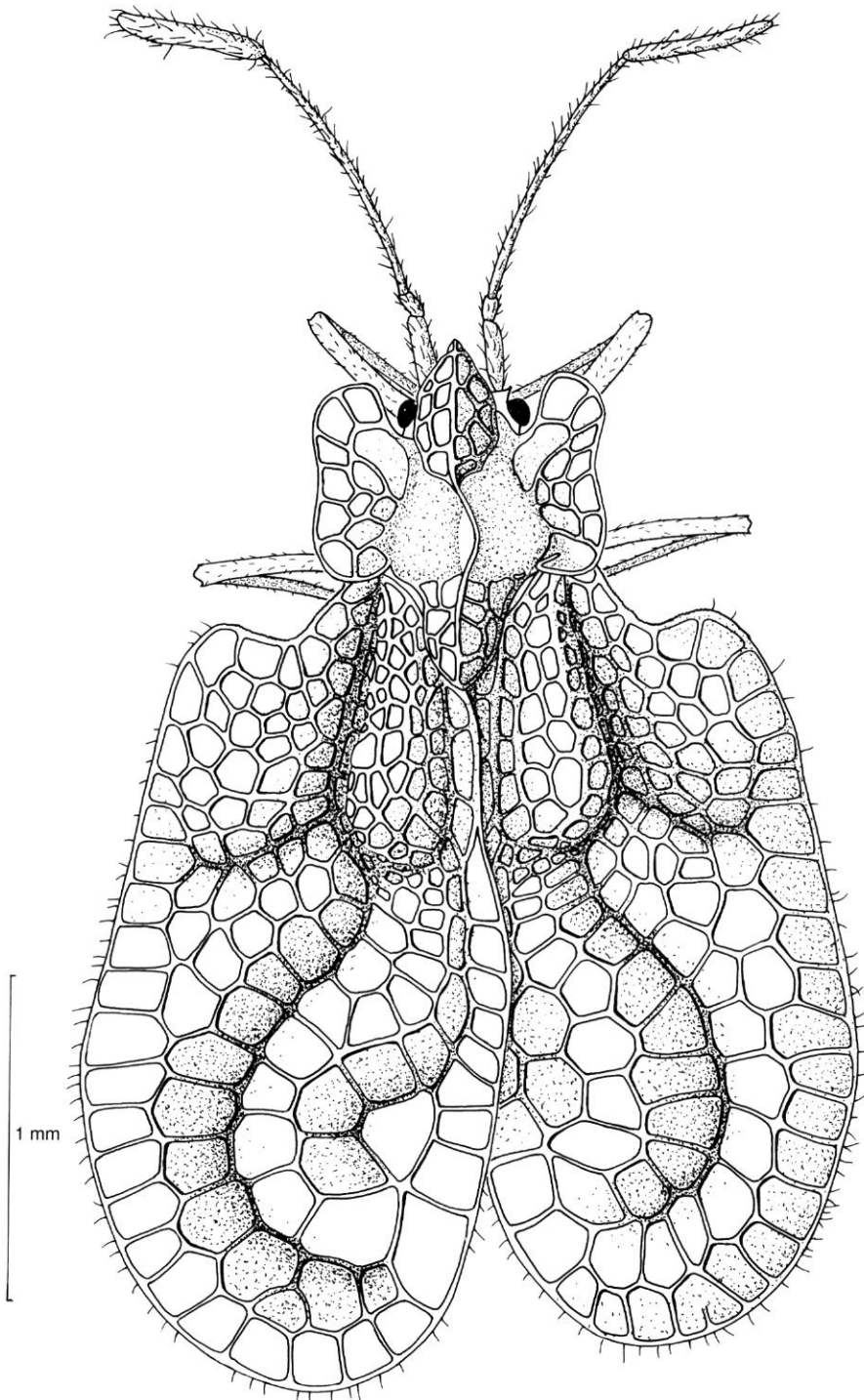


FIG. 2. — *Dicysta neocaledonica* n.sp., habitus.

high as the hood at the top of the crest and as long as the hood. Posterior pronotal process inflated. Hood shorter than the median carina, longer than wide, narrowed anteriorly, covering entire head except the eyes, which are visible from above, extending slightly beyond apices of the first antennal joint. Paranota wide, reflexed upward, slightly constricted laterally, with two or three rows of areolae at the widest part.

Hemelytra posteriorly divergent with apices widely separated, much longer and wider than the abdomen, sharply widened from the base, lateral margins finely serrate near the base and clothed with short pale hairs; dorsal surface with some scattered fine hairs; costal area very wide, five areolae, deep at base, although these are rather small, biseriate at apex, the areolae larger than at base. Subcostal and discoidal areas strongly elevated, forming a prominent tumid area; sutural area uniseriate along the side of discoidal area, biseriate thereafter.

***Dicysta serrata* n.sp.**

(Figs 3, 4)

TYPE LOCALITY. — **New Caledonia.** Rivière Bleue (P7 see later), alt. 170 m, sampled by fogging, 17.VII.1992, holotype ♂ and 5 paratypes, 3 ♂♂, 2 ♀♀ (MNHN, Paris).

DERIVATIO NOMINIS. — The name refers to the finely serrate margins of various parts of the hemelytra, the paranota and the hood.

DESCRIPTION

White, hyaline, iridescent; body brown ventrally, with veins and veinlets brownish. Pronotum brownish-testaceous. Legs and antennae pale. Length 3.20 mm, width at widest part 2.69 mm. Head very short, without cephalic spines, concealed by an overhanging hood, bucculae areolate and closed in front, rostrum extending beyond the metasternum. Antennae long, slender, sparsely pubescent, last joint slightly stouter, joint measurements (in mm): I, 0.22; II, 0.08; III, 0.70; IV, 0.42. Legs long, slender, slightly pubescent.

Pronotum moderately convex, not punctured, glabrous, lateral carinae absent, median carina high, higher than the hood at top of crest, slight-

ly shorter than the hood. Posterior pronotal process inflated. Hood longer than the median carina, longer than wide, narrowed anteriorly, covering entire head except the eyes, which are visible from above, extending beyond apices of the first antennal joint, finely serrate at the tip and sides. Paranota wide, reflexed upward, slightly constricted laterally, bearing two rows of areolae, finely serrate with four to seven small spines anteriorly.

Hemelytra divergent posteriorly, with apices widely separated, much longer and wider than

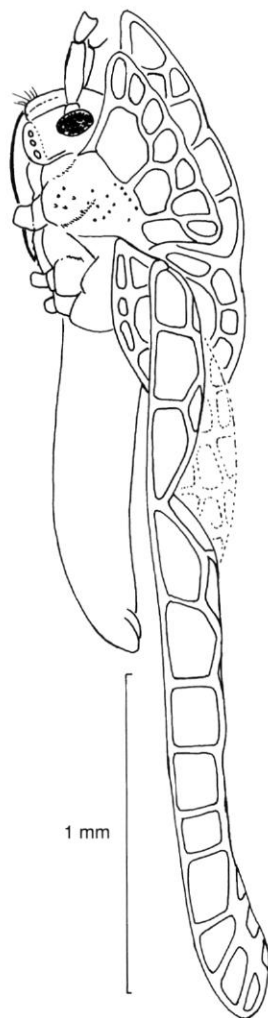


FIG. 3. — *Dicysta serrata* n.sp., profile.

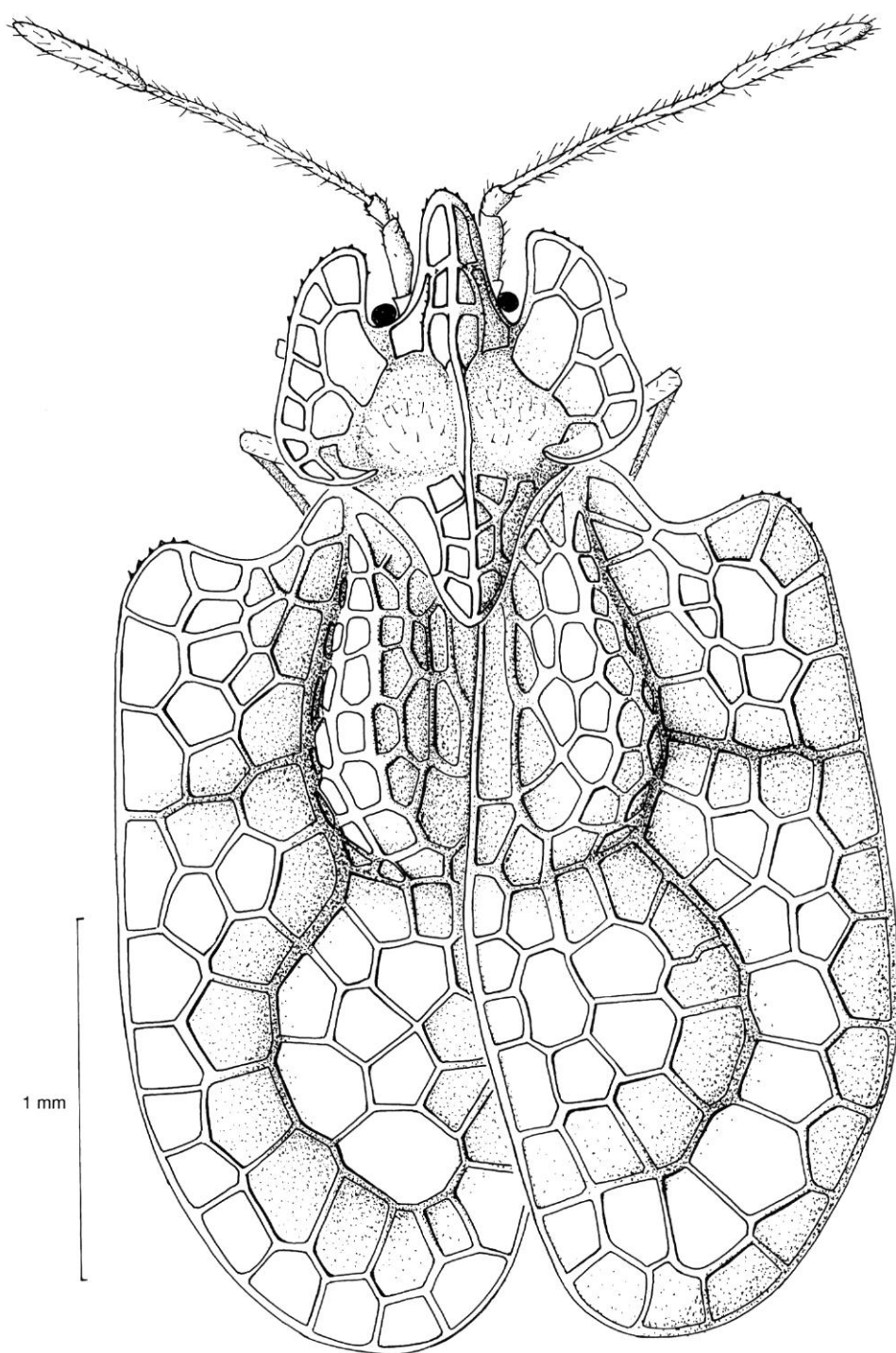


FIG. 4. — *Dicysta serrata* n.sp., habitus.

the abdomen, sharply widened from the base, lateral margins finely serrate near the base with six small spines; costal area wide, four areolae deep at base, these rather large, biseriate at apex, the areolae slightly larger than at base. Subcostal and discoidal areas strongly elevated, forming a prominent tumid region; sutural area uniseriate along the side of discoidal area and biseriate thereafter.

REMARKS

The genus *Dicysta* was founded by Champion in 1898 for a single species from Panama and enlarged by Drake in 1922. The two species described above are placed in the genus *Dicysta*, despite the fact that they lack a short, obtuse frontal spine, as

specified in the description of this genus by Champion (1898), and that their rostral groove is open in front. In addition, they have a lower and less inflated posterior pronotal process and narrower paranota than most other species of *Dicysta*. The new differ in having the paranotal process triseriate in *D. neocaledonica* n.sp. and biseriate in *D. serrata* n.sp.; the costal area pentaseriate at the base in *D. neocaledonica* n.sp. and quadriseriate in *D. serrata* n.sp.; the side of the hemelytra pubescent in *D. neocaledonica* n.sp. and glabrous in *D. serrata* n.sp.; and the hood much wider in *D. neocaledonica* n.sp. than in *D. serrata* n.sp. To separate the species of *Dicysta* from the Australasian region, an identification key is given below.

KEY TO THE AUSTRALASIAN SPECIES OF *Dicysta*:

1. Paranota strongly reflexed 2
- Paranota not reflexed 3
2. Hood and posterior process of nearly equal size *D. parilis* Drake, 1939
- Hood larger than posterior process *D. cara* Drake, 1939
3. Hood as high as posterior process *D. serrata* n.sp.
- Hood higher than posterior process *D. neocaledonica* n.sp.

DISTRIBUTION

The genus *Dicysta* has a Gondwanan distribution. Four species are found in the Australian region: two in Queensland and two in New Caledonia. The other species are neotropical, being found in Brazil, Panama, Peru and Paraguay.

The two new species are present in the two evergreen rainforests (Rivière Bleue), but absent from the sclerophyllous forests sampled. The primary rainforest of Rivière Bleue has been divided into various study plots. Plot 6 (alt. 160 m), which is a part of the forest on ultramafic alluvium, is botanically different from plot 7 (alt. 170 m), situated on sloping peridotite colluvium (see

Bonnet de Larbogne *et al.* 1991; Jaffré & Veillon 1990). *D. neocaledonica* n.sp. was present only in the alluvial plot 6, whereas *D. serrata* n.sp. was present only in the deeply-sloping plot 7.

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